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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,298	03/24/2004	Tack-Kyun Choi	45524	3832

1609 7590 04/11/2007  
ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P.  
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WASHINGTON,, DC 20036

EXAMINER
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WENDELL, ANDREW

ART UNIT	PAPER NUMBER
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2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/807,298	CHOI, TAEK-KYUN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Andrew Wendell	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-14 and 18-24 is/are allowed.
- 6) ☒ Claim(s) 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peckham et al. (US Pat# 6,298,224) in view of Ito et al. (US Pat# 6,993,357) and further in view of Irube et al. (US Pat# 6,377,818).

Regarding claim 15, Peckham teaches separating a received signal into a corresponding communication service using a Radio Frequency switch 402 (Fig. 4, it receives radio frequency and therefore a Radio Frequency switch because it receives GSM, DCS, and PCS signals (Col. 2 lines 18-30)); separating the communication service using a diplexer 404 (Fig. 4). Peckham fails to teach separating a call signal and a TV signal and using diplexers.

Ito's mobile radio communication terminal teaches separating a received signal into a corresponding communication service (Fig. 4); separating the communication service into a call signal 5b (Fig. 5) and a TV signal 5d (Fig. 5), and performing at least one of a calling function 5b (Fig. 5) and a TV reception function 5d (Fig. 5).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate separating a call signal and a TV signal as taught by Ito into Peckham's multiple frequency band

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receiver in order to increase battery life and prevent upsizing of the apparatus (Col. 1 lines 48-56).

Peckham and Ito fail to teach using diplexers.

Irube teaches using diplexers 17 and 20 (Fig. 1) to separate communication services.

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate using diplexers as taught by Irube into separating a call signal and a TV signal as taught by Ito into Peckham's multiple frequency band receiver in order to have portability and storability do not deteriorate (Col. 1 lines 20-24).

Regarding claim 16, Ito further teaches enabling watching of TV on the multimode mobile phone when a phone call is not in session 5d (Fig. 5).

Regarding claim 17, Irube further teaches wherein the calling function and the TV reception function (video) are simultaneously performed by receiving the call signal and the TV signal (Col. 1 lines 25-56).

***Allowable Subject Matter***

3. Claims 1-14 and 18-24 are allowable over the cited prior art.

Regarding independent claim 1, Ito et al. (US Pat# 6,993,357) teaches performing a TV reception function 5d (Fig. 5) and a calling function in a multimode mobile phone supporting two or more communication services (Fig. 4).

The prior art of record fails to teach an apparatus for simultaneously performing a TV reception function and a calling function in a multimode mobile phone supporting

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two or more communication services, comprising a first Radio Frequency (RF) switch for separating a received signal into N communication services; M duplexers associated with the communication services, for separating a signal received from the first RF switch into a call signal and a TV signal; a second RF switch for applying the TV signal received from the duplexers to a TV tuner; and a controller for controlling an overall operation of the multimode mobile phone and controlling the first RF switch and the second RF switch according to the received signal.

The prior art of record fails to teach the claimed subject matter as claimed and substantially connected in claims 1-5. Note, claims 1-5 are objected to for minor informalities.

Regarding independent claim 6, in Ito et al. (US Pat# 6,993,357) in view of Pau (US Pat# 6,754,508). Ito teaches performing a TV reception function 5d (Fig. 5) and a calling function in a tri-mode mobile phone capable of supporting a Code Division Multiple Access service (Fig. 4). Pau teaches a tri-mode mobile phone capable of supporting a Personal Communications Service (Fig. 5).

The prior art of record fails to teach an apparatus for simultaneously performing a TV reception function and a calling function in a tri-mode mobile phone capable of supporting a Code Division Multiple Access (CDMA) service, a Personal Communications Service (PCS) service and a Global Positioning System (GPS) service, the apparatus comprising a first Radio Frequency (RF) switch for switching a received signal to a first diplexer, a second diplexer or a GPS RF switch; the first diplexer for separating a signal received via the first RF switch into a PCS signal and a

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TV signal; the second diplexer for separating a signal received via the first RF switch into a CDMA signal and a TV signal; and a second RF switch for switching the TV signal from the first diplexer and the second diplexer to a TV tuner.

The prior art of record fails to teach the claimed subject matter as claimed and substantially connected in claims 6-14.

Regarding independent claim 18, in Ito et al. (US Pat# 6,993,357) in view of Pau (US Pat# 6,754,508). Ito teaches performing a TV reception function 5d (Fig. 5) and a calling function in a tri-mode mobile phone capable of supporting a Code Division Multiple Access service (Fig. 4). Pau teaches a tri-mode mobile phone capable of supporting a Personal Communications Service (Fig. 5).

The prior art of record fails to teach a method for simultaneously performing a TV reception function and a calling function in a tri-mode mobile phone including a first Radio Frequency (RF) switch for switching a received signal to a first diplexer, a second diplexer or a GPS RF switch, the first diplexer for separating a signal received from the first RF switch into a PCS signal and a TV signal, the second diplexer for separating a signal received from the first RF switch into a CDMA signal and a TV signal, and a second RF switch for switching the TV signal from the first and second diplexers to a TV tuner, the tri-mode mobile phone being capable of supporting a Code Division Multiple Access (CDMA) service, a Personal Communications Service (PCS) service and a Global Positioning System (GPS) service, the method comprising the steps of receiving a signal in a PCS mode of the tri-mode mobile phone; if the received signal is a PCS signal, applying the PCS signal to a PCS diplexer via the first diplexer

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to perform a calling function; and if the received signal is a TV signal, applying the TV signal to the TV tuner via the first diplexer and the second RF switch to perform a TV reception function.

The prior art of record fails to teach the claimed subject matter as claimed and substantially connected in claims 18-20.

Regarding independent claim 21, in Ito et al. (US Pat# 6,993,357) in view of Pau (US Pat# 6,754,508). Ito teaches performing a TV reception function 5d (Fig. 5) and a calling function in a tri-mode mobile phone capable of supporting a Code Division Multiple Access service (Fig. 4). Pau teaches a tri-mode mobile phone capable of supporting a Personal Communications Service (Fig. 5).

The prior art of record fails to teach a method for simultaneously performing a TV reception function and a calling function in a tri-mode mobile phone including a first Radio Frequency (RF) switch for switching a received signal to a first diplexer, a second diplexer or a GPS RF switch, the first diplexer for separating a signal received from the first RF switch into a PCS signal and a TV signal, the second diplexer for separating a signal received from the first RF switch into a CDMA signal and a TV signal, and a second RF switch for switching the TV signal from the first and second diplexers to a TV tuner, the tri-mode mobile phone being capable of supporting a Code Division Multiple Access (CDMA) service, a Personal Communications Service (PCS) service and a Global Positioning System (GPS) service, the method comprising the steps of receiving a signal in a CDMA mode of the tri-mode mobile phone; if the received signal is a CDMA signal, applying the CDMA signal to a CDMA diplexer via

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the second diplexer to perform a calling function; and if the received signal is a TV signal, applying the TV signal to the TV tuner via the second diplexer and the second RF switch to perform a TV reception function.

The prior art of record fails to teach the claimed subject matter as claimed and substantially connected in claims 21-24.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 15-17 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Wendell whose telephone number is 571-272-0557. The examiner can normally be reached on 7:30-5 M-F.




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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Andrew Wendell  
Examiner  
Art Unit 2618

4/3/2007

  
**NAY MAUNG**  
**SUPERVISORY PATENT EXAMINER**